

for—

- ☐ Mark V Model 500 (516525)
- ☐ Mark V Model 510 (516619)
- ☐ Sears Miter Bar (516526)
- ☐ Delta Miter Bar (516527)

Introduction

There are four miter bars (listed above) available from Edgewood. They are made of steel for long life, and each fits a specific table saw's miter slot. The miter bars can be used with the Shopsmith Cross-Cut Sliding Table, shown in Fig. 1, as well as a variety of jigs you can make yourself. This miter bar product literature describes several jigs which should prove useful in your shop.

Periodically, wax (use only furniture wax) the miter bar and the bottom of the jig. Before working with the miter bar, follow these safety warnings and the warnings for the specific jig you make:

Safety

WARNING

- Read, understand and follow all the instruction manuals provided with the table saw you are using.
- Turn off and unplug the table saw before performing any assembly and alignment procedures near or on the table saw.
- Always turn off the table saw and allow the blade to completely stop before removing the scrap and the workpiece.
- Check the table saw and jig and miter bar alignment before performing any operations. Misalignment could result in kickback and personal injury.
- Always support the miter bar and jig on both the infeed and outfeed sides.
- Always support the stock on both the workpiece side and the waste side. On the waste side, attach an auxiliary table which is the same thickness as the jig. Failure to properly support the stock on both the workpiece side and the waste side could result in kickback and personal injury.
- Never use the miter bar jig to cut a board shorter than 12" long, wider than 15" across, or longer than 8" in length.
- Construct any self-designed and shop-made jig with bolts, screws and other metal parts at least 1" from the saw blade's path. Contacting the saw blade with screws, bolts, or other metal parts could damage the equipment and result in personal injury.
- Store the miter bar and jig so the bar is not misaligned and is off the floor, away from moisture.

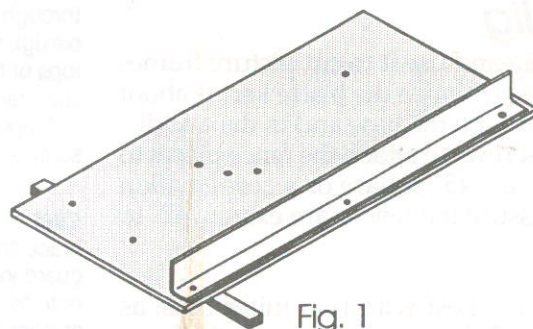


Fig. 1

Guidelines for Making and Using Jigs for the Table Saw

• Countersink or counterbore all screw holes and bolt holes. Make sure no screw, bolt, nut, nail, or other metal part catches or scratches the saw table or the wood. A protruding screw head, for example, can mis-align the cut and create a hazard. *An alternative is to use 3/4" long pan head wood screws and matching washers. With wood screws, don't drill through the jig base and don't securely tighten them until final alignment is achieved.*

• Use a good grade 3/4" plywood (with at least one good side) for all jig bases.

• For all Edgewood miter bars, use 1-1/4" long bolts with matching flat washers, split lock washers and hex nuts. Bolts must go through the miter bar then through the jig base. The matching washers and hex nuts must be on the top side of the jig's base and flush or just below the base top's surface.

• To attach the miter bar to the jig:

1. Insert the miter bar in the saw table's miter slot.
2. Place the jig on top of the miter bar in approximate operating position.
3. Use a precision square to align the jig to the blade (make sure the square does not rest on a blade tooth). When aligned, mark the front and back edges where the miter bar touches the jig.
4. Use the square and a straightedge to transfer the miter bar's profile onto the underside of the jig. Hold the miter bar against the bottom of the jig and align it with the lines. Mark the drill holes. The jig must always have at least two bolts (or wood screws) attaching the miter bar to the jig bottom.
5. Drill and counterbore the holes. Attach the miter bar, but do not securely tighten yet.
6. Mount the jig on the saw table with the miter bar in the miter slot. Again, check the alignment of the jig to the blade. When aligned, securely tighten the miter bar bolts (or wood screws).

Table Saw Jigs Using a Miter Bar

See the jig's exploded view and follow the above general instructions. Exact dimensions for the size jig you will build are up to you and the particular sized saw table on which you will be using the jig.

Miter Jig

Make this jig and use it to cut picture frames and moldings. Notice the blade kerf is about half way through the base and in the middle. Use wood screws to attach the fence pieces to the base. Use a 45° square or a combination square to assure the fences are exactly 45° to the blade.

This jig works best with two miter bars, as shown in Fig. 2. Attach sandpaper to the fence faces to serve as a non-slip surface. Add a board (not shown) along the back edge of the jig. This braces the two fences. Enclose the tops of the fences and the brace with plexiglass, so saw chips and waste stop will be prevented from flying up. Fig. 3 shows the operation of the miter jig.

WARNING

- Always set the blade height so it is no more than 1/4" above the top edge of the workpiece.
- Never continue the cut once you have cut through the workpiece.
- Always mount the jig and workpiece with the table saw turned off.
- Always have the saw blade guard installed, as shown in Fig. 3, except for the cross-cut jig.

Cross-cut Jig

The cross-cut jig is for cross-cutting boards. The exploded view shown in Fig. 4 underscores the simplicity of this jig. Cut the blade kerf after you have squared the jig to the blade and installed the miter bar. Make sure all wood screws are clear of the blade path before cutting the kerf. Fig. 5 shows the cross-cut jig being used to cross-cut a board.

WARNING

- Use extra care to keep hands and fingers away from the Danger Zone (3" to the left and 3" to the right—above, behind or in front of the saw blade) as the guard must be removed to use this jig.

Add a brace 1" thick x 1" wide x 10" long. Cut ends at 45°, then attach flush with the tops of miter fences.

Use 150 grit sandpaper with adhesive back.

For miter fences, use hard wood 3/4" thick x 2-1/4" wide x 17" long. Cut ends at 45°.

Jig base: 3/4" thick x 20" wide x 24" long.

Add a plexiglass guard fitting the top edge of the each miter fence to the top edge of the brace. Drill screw holes through the plexiglass into the tops of the fences and brace. Fasten with appropriate screws.

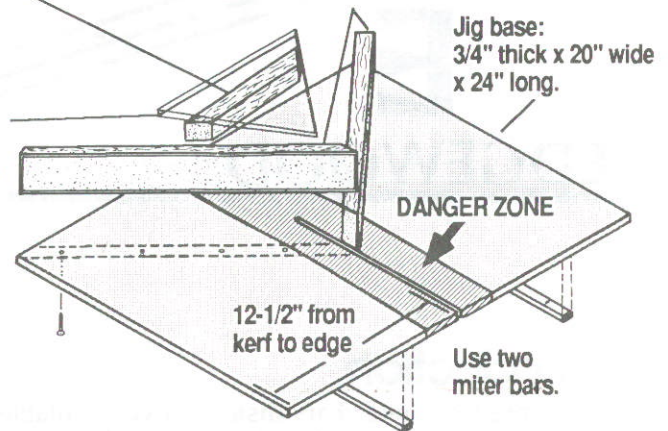


Fig. 2

Miter Jig in use. Note the brace and plexiglass guard installed. Also note hands and fingers at least 3" away from blade kerf on either side of jig.

DANGER ZONE- Keep hands and fingers out of danger zone, which is 3" to the left and 3" to the right of the blade kerf.

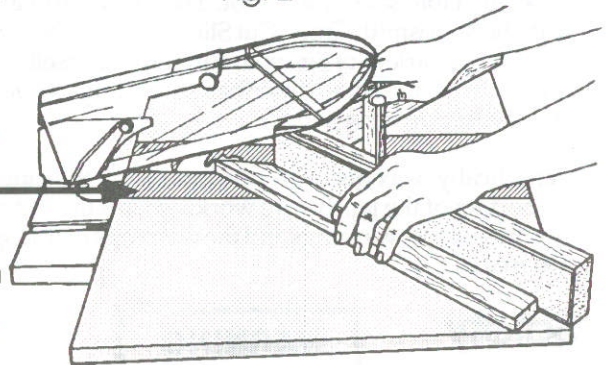
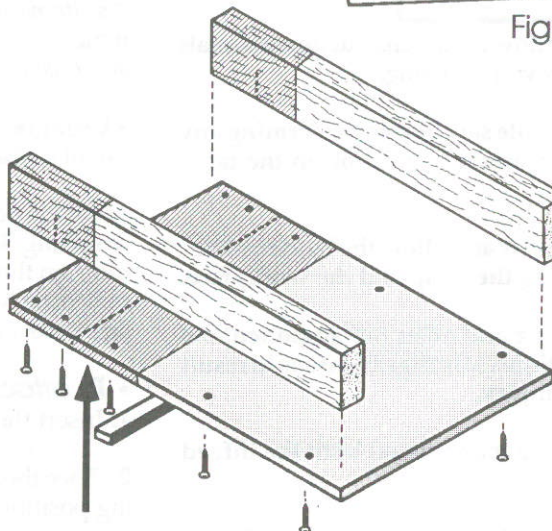


Fig. 3



Back fence and front fence each should be: 1-1/2" thick x 3-1/2" width x length of jig base.

Jig base should be: 3/4" thick x same width and length of the table saw top. Cut the kerf after assembling and aligning jig.

DANGER ZONE- Keep hands and fingers out of danger zone, which is 3" to the left and 3" to the right of the blade kerf.

Fig. 4

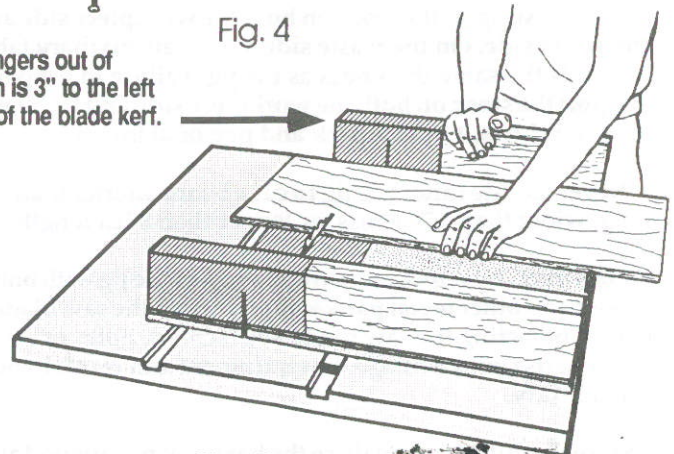


Fig. 5

- Never stand in line with the saw blade. Stand to one side, as shown in Fig. 5.

- Never continue the cut once you have cut through the workpiece.

- Always mount the jig and position the workpiece with the table saw turned off.

- Always turn off the table saw and allow the blade to come to a complete stop before removing the scrap and the workpiece.

- Always support the stock on both the workpiece side and the waste side. On the waste side, attach an auxiliary table the thickness of the jig. Failure to properly support the stock on both the workpiece side and the waste side could result in kickback and personal injury.

Tenon Jig

The tenon jig lets you cut tenons with a circular saw blade. The exploded view in Fig. 6 shows the basic construction and directions of wood grain. Make sure all screws and bolts are countersunk or counterbored, and are clear of the saw blade. Also, back up the workpiece with scrap of the same thickness as the workpiece. This will reduce tear-out. Fig. 7 shows the tenon jig in use.

WARNING

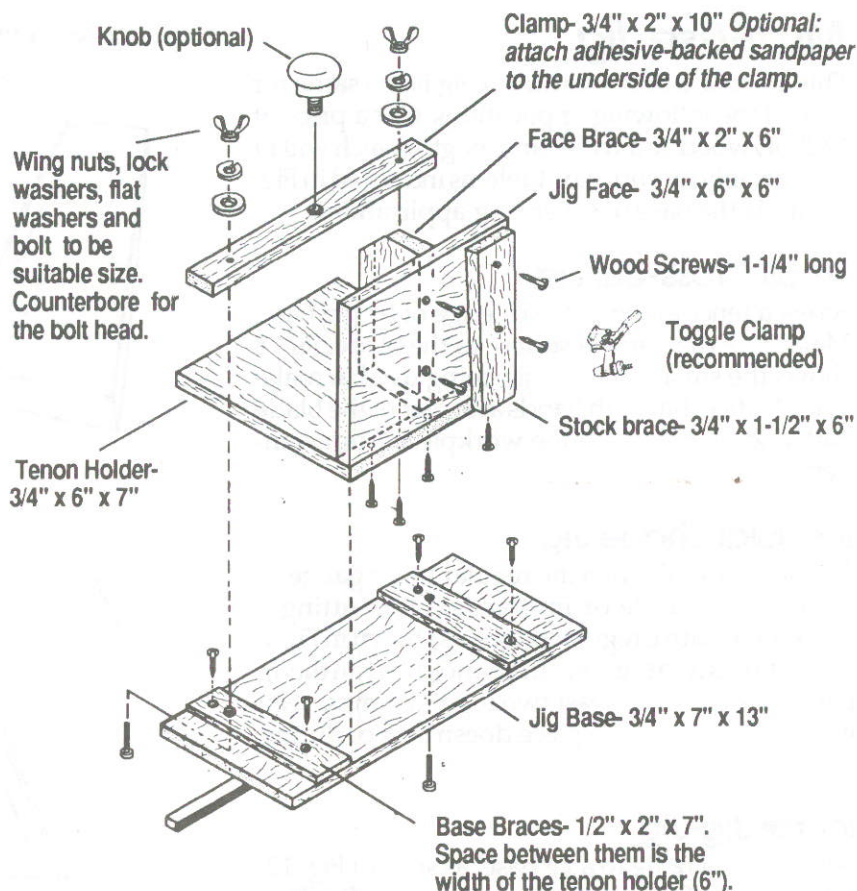
- Use extra care to keep hands and fingers away from the Danger Zone (2" high and to the edge of the table insert) as the guard must be removed to use this jig.

- Always have the table saw turned off—then mount the tenon jig in the miter slot and secure the workpiece in the jig.

- The upper saw guard must be removed from the table saw due to the type of cut made with the tenon jig. Make sure to keep your hands on the back side of the jig out of direct line of the saw blade. Always use at least one toggle clamp to hold the workpiece.

- Before operating the tenon jig, the tenon holder should be firmly clamped against one of the base braces in order to set it at perpendicular to the blade. Then the jig clamp must be securely tightened at both ends.

- Always feed the workpiece slowly all the way past the saw blade. After the cut is made, always turn off the table saw and allow the blade to come to a complete stop, before removing the tenon jig and workpiece from the outfeed side of the table.



Note the direction of wood grain. It is important to the stability of the tenon jig that the wood grain is in the indicated directions shown above.

Fig. 6

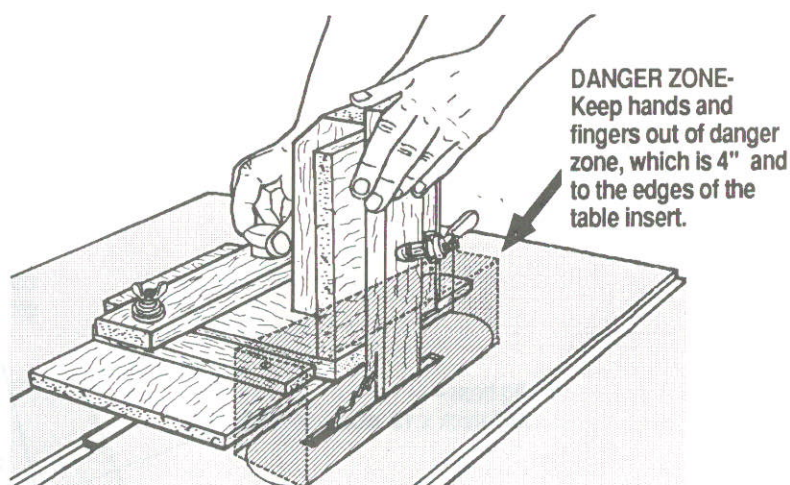


Fig. 7

MAXIMUM STOCK SIZES FOR USING THE TENON JIG

- Maximum thickness of stock used with the tenon jig is 1".
- Maximum depth of cut (also the height of blade) should not exceed 1-3/4".

Multi-Use Jig

This structure of the multi-use jig is the same for each of the following applications. Cut a piece of 1/2" plywood to a width and length which will fit comfortably on your saw table, as indicated in Fig. 8. This is the base of several jig applications.

Small Cross-cut Jig

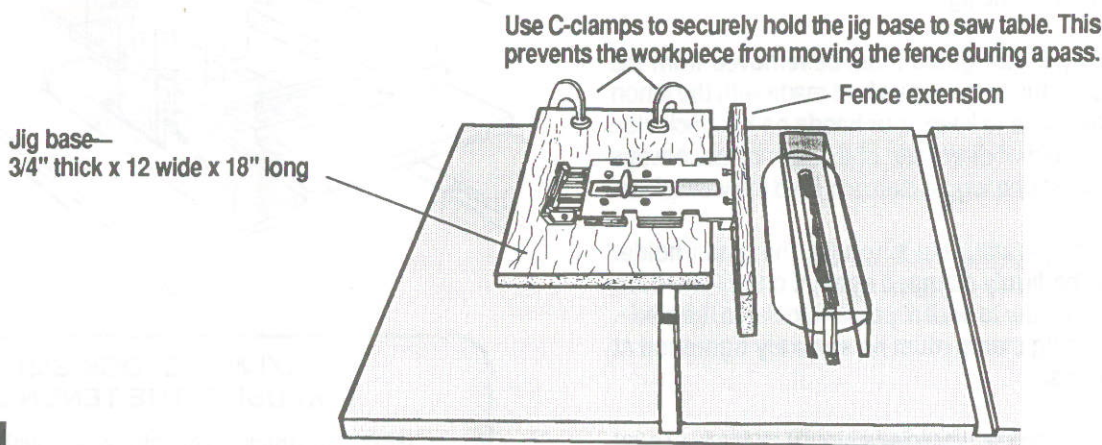
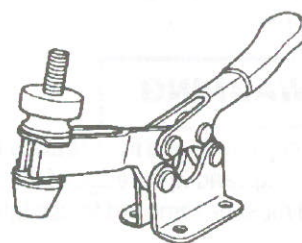
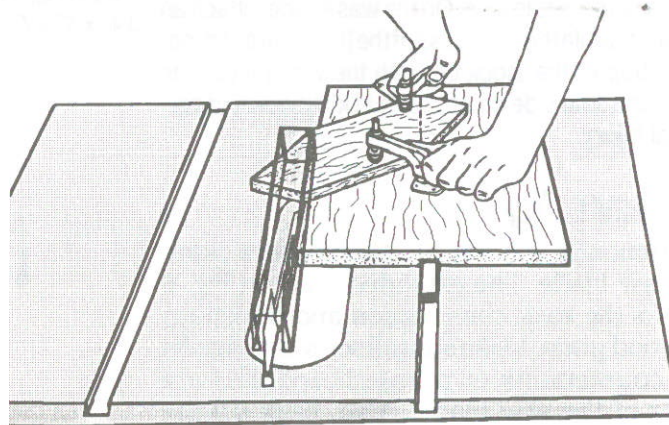
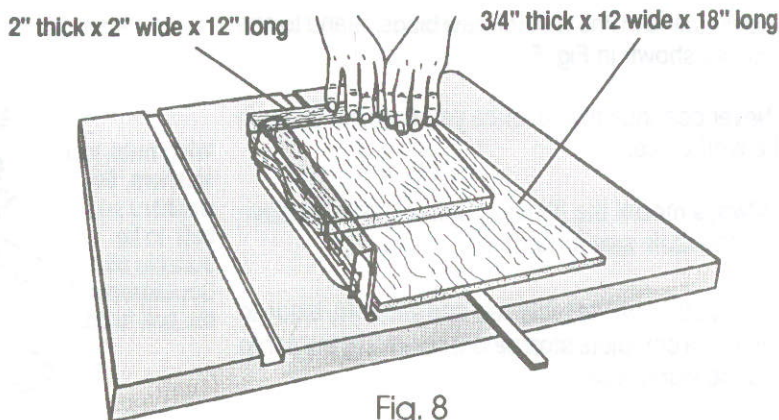
Screw a fence along the back edge of the jig base. Make sure the fence is square to the blade. Fig. 8 shows the small cross-cut jig being used to make a cut. Notice that both hands are clear of the blade path and help prevent the workpiece from wandering.

Irregular Shape Jig

This jig is useful when the regular miter gauge or a fence are unsafe or impractical for cutting a workpiece with irregular edges, as shown in Fig. 9. Fig. 9 shows two toggle clamps mounted on the jig base. Always use at least two toggle clamps, seen in Fig. 10, so the workpiece doesn't pivot during the cut.

Incra® Jig-Jig

Attach an Incra Jig to a jig base, as seen in Fig. 12, then attach a fence extension to the Incra Jig. This setup gives you a very accurate way of making precise incremental cuts. Consult the Incra Jig manual for details on use with this and other setups, as well as safety tips.



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